



MECKLENBURG COUNTY CODE ENFORCEMENT

RESIDENTIAL
BUILDING CODE
INTERPRETATIONS
AND
CLARIFICATIONS

NCRC
1998-2012

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: ACCESSORY BUILDING FOOTERS AND DIMENSION

REVIEWED: BUILDING CONSISTENCY TEAM

Question:

On an accessory storage building where is the 12' in any direction measured to and can an accessory storage building be built on stacked blocks, how far apart can they be spaced?

Code reference:

Chapter 1 section R101.2 scope

Answer:

The requirement for a permit is based upon any **plan dimension** (no overhangs) greater than 12' in any direction; also with any vertical height that is greater than 12' (measured from grade to mean roof line). Many buildings are elevated due to topography or ground clearances for non-treated joists/subfloor. The department has allowed based upon previous engineering the following practice:

- Precast solid blocks/footers or cap blocks can be used and dry stacked on grade
- Runners must be minimum 4x4
- Maximum clear span between blocks is 4'
- Must be 400 square feet or less, 1 story and tied down at the corners per section R101.2

Approved By Jeff Vernon Date 12/29/2015

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: BRICK FLASHING – PIER AND CURTAIN WALL FOUNDATION

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Can brick flashing be eliminated on homes with pier and curtain wall foundation?

Code reference:

Sections R703.7.5, R703.7.6 and R703.8

Answer:

No. The North Carolina Department of Insurance issued a formal interpretation on January 14th, 1998 in which DOI stated the following:

“flashing and weepholes are required in masonry veneer construction regardless of the type of foundation wall construction employed”.

Approved By Gene Morton

Date 1/1/08

CODE



MECKLENBURG COUNTY

Building Code Enforcement

INTERPRETATION

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: EGRESS REQUIREMENTS FOR DETACHED GARAGES (ACCESSORY BUILDINGS)

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What are the requirements for egress on a single story detached garage; garages with storage above & garages with habitable space above?

Code reference:

Section R311 & Chapter 2 Definition of Accessory Building

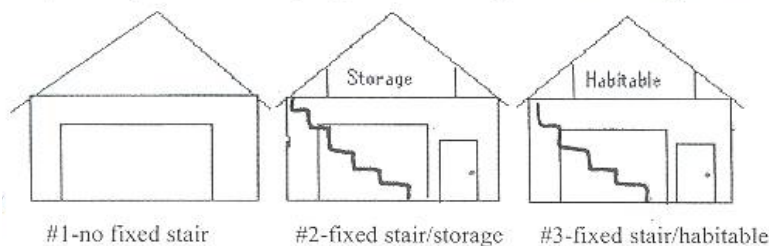
Answer:

The residential Code requires a means of egress out of an accessory building (detached) since not a dwelling unit egress can be provided in the following examples:

Example #1- A single story detached garage only, no fixed stairs to attic storage or no storage above can use the overhead door as a the sole means of egress from that space.

Example #2- A detached garage with a fixed set of stairs to storage only must have a compliant door per section R311.4 Stairs can be open to garage (no separation required).

Example #3- A detached garage with a fixed set of stairs to habitable space above must have a compliant door per section R311.4 not passing through a garage per R311.4.1 and separation requirements as listed in section R309. This could be accomplished by stair chase with drywall separating stairs/egress door from garage or an exterior flight of stairs off upper level.



Approved By Gene Morton Date 1/1/08

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: EXTERIOR DOOR SWING DIRECTION

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What are the code requirements for exterior door swing directions over landings, floors or stairways?

Code reference:

Sections R311.3, R311.3.1, R311.3.2, R311.3.3

Answer:

Door swing differs between the required exit door and all other exterior doors.
(Storm and Screen doors are exempt from these requirements)

Note these definitions: Landing is minimum 3' x 3'. Floor is any area greater than a landing.
Steps/Stairway is more than one contiguous riser

Required Exit Door: Must have landing or floor on each side of door. Floor or landing may be 1.5" lower than threshold on non-swing side.
Exception: The Exterior landing or floor shall not be greater than 8.25 inches below the top of the threshold provided the door does not swing over the landing or floor.

Other Exterior Doors: Floor or landing may be 8.25" lower than threshold regardless of door swing. 8.25" may only occur on one side of the door – 1.5" must occur on the other side regardless of door swing.

May have stairway (no landing) to door on exterior side provided door swings in. (**Note:** this same no landing rule applies to interior doors provided door does not swing over stairway)

Approved By Jeff Vernon

Date 1/28/16

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: ENGINEERED FOOTER/FOUNDATION REPAIRS (PIER SYSTEMS)

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What information and inspections are required for engineered footer/foundation repairs such as helical piers

Code reference:

Section R301.1.3 & NC Administrative Code and Policies section 105.

Answer:

1. **Footer inspection-** At time of footer inspection an engineering design letter will be required to be on site for field inspector review and to collect to place on file with permit documents.
2. **Final inspection-** When all work is completed a final inspection will be conducted and a engineer's letter that signs off on installation meeting design requirements will need to be on site for inspector to review and collect. In addition the grade around the structure will be reviewed to verify that positive drainage is still provided around structure.

Approved By Gene Morton

Date 1/1/08

CODE



MECKLENBURG COUNTY
Building Code Enforcement

INTERPRETATION

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: ENGINEERED HELICAL PIER FOUNDATIONS REPAIRS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What information and inspections are required for engineered helical pier foundation repairs?

Code reference:

Section R301.1.3 & NC Administrative Code and Policies section 105.

Answer: Permit must be issued before work begins and there are two inspection trips are required as follows:

1. **Footer inspection-** At time of footer inspection an engineering design letter will be required to be provided (typically uploaded to the permit from contractor's dashboard) for field inspector to review that design is sealed. Inspection should be called in the day work begins however contractor doesn't have to wait. Upon arrival inspector will verify work in progress and that design is sealed by a NC registered design professional.
2. **Final inspection-** When all work is completed a final inspection will be conducted and an engineer's letter that signs off on the completed installation shall be provided (typically uploaded to the permit). The inspector will verify that an appropriate letter with language that covers the scope of work has been provided and inspect to see that the grade around the structure has been restored (positive drainage).

Note: This process is different for commercial structures which will require special inspections per Chapter 17 of the NC Building Code.

Approved By Lon McSwain Date 08/24/2015

INTERPRETATION



MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: JOISTS BLOCKING

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What are the Code requirements for lapping and blocking of floor joists ends?

Code reference:

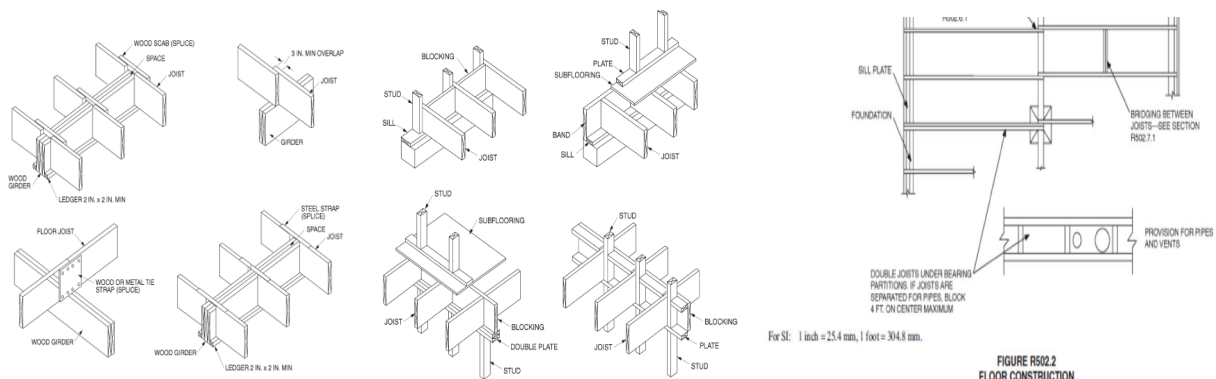
Sections R502.6.1 and R502.7, R502.7, R502.7.1 and Fig. R502.2

Answer:

Floor joists framed over a bearing support shall be “tied together” using a 3” overlap, wood or metal splices, or continuous floor sheathing.

In addition, floor joist ends shall be “prevented from rotating” by the use of lateral supports at each end. Joists are to frame into a header, band or rim joists, an adjoining stud, or be laterally supported by full-depth solid blocking installed between the ends of the joists.

Intermediate, mid-span blocking or bridging is not required until the joists size exceeds 2x12. ~~Solid~~ blocking is required between joists per R502.4 and Fig. R502.2 when there is a load from above (such as a bearing wall) and load is brought down to a lower girder or interior bearing walls. Blocking is needed to transfer load from above around floor joist at these interior bearing locations.



Approved By Jeff Vernon Date 1/28/16

CODE



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-family Dwellings

SUBJECT: Minimum Stair Width

REVIEWED BY: Consistency Team

QUESTION:

What is minimum required stair width?

CODE REFERENCE:

Section R314.1

ANSWER:

Stairways shall not be less than 36" in clear width above permitted handrail height and below permitted head room height. Minimum width "at and below" the handrail height shall not be less than 31.5" where a handrail is installed on one side and 27" where handrails are provided on both sides.

Approved By _____ Date: 07/01/02

CODE _____



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Multiple Wythe Masonry Bonding

REVIEWED BY: Consistency Team

QUESTION:

May bonding in a multiple wythe masonry wall be eliminated from the top of a wall down to the interval distance listed in Section R608 for a given bonding method?

CODE REFERENCE:

Section R608

ANSWER:

No. The bonding methods described in Section R608 must be at the top of the wall, then at intervals listed down to the footing. Header bonding must occur in the top course and prefabricated bonding ties (e.g., Z ties or Durawire) must be in the upper most bonding bed joint of the wall.

Exception: On walls where the facing and backing wythe bed joints match elevations only every 16" (such as occurs with oversized brick and block walls) the upper most bond only may be achieved using a structure wall tie (not a veneer tie). This will allow bonding to occur no further down than 8" from the top of any wall, with Section R608 bonding to occur in the rest of the wall.

Approved By _____ Date: 06/23/98

CODE _____



MECKLENBURG COUNTY

ENGINEERING & BUILDING

STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: The North Carolina Administration and Enforcement Requirements Code

SUBJECT: New Residential Building Occupancy

REVIEWED BY: Consistency Team

QUESTION:

What defines Occupancy?

When may Occupancy Occur?

What are the consequences of occupying too soon?

CODE REFERENCE:

Sections 303, 307, and 308

ANSWER:

Occupancy is to reside or dwell in and to maintain control over placement of personal items within the structure (other than those connected with the scope of work as shown on the permit- e.g. Installation of permanent fixtures and appliances)

Occupancy may only occur if a Certificate of Occupancy or a Temporary Certificate of Occupancy granted.

Occupancy prior to the above approvals shall be an illegal occupancy and to permit holder may be subject to the following:

- Disconnection of utility services
- Suspension of Temporary Power Privileges
- Revocation of Temporary Power Privileges
- Removal of occupants and their belongings to accommodate inspections
- Revocation of permits

Approved By _____ Date: 06/23/98

CODE _____

INTERPRETATION _____



MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: NEW STRUCTURE THRESHOLD

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

During a remodel of a house it is found that more demolition is required than original thought, at what point should this be considered a new structure rather than a remodeling upfit.

Code reference:

Section 204.4 of the NC Administrative Code and Policies

Answer:

When a structure meets the following 2 items it will be considered a new structure and permitted as a new residence with a new Certificate of Occupancy:

- Structure becomes uninhabitable (ie: no power, water, required heating, etc...) and
- Demolition exceeds 50% of the original building's structural components

Note: To consider the structure a new residence a demolition permit will be required to be issued along with the new residence permit. Contractors should consider these thresholds when permitting a residential remodel project.

Approved By Gene Morton

Date 1/29/09

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: PERMIT EXPIRATIONS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What is the minimum amount of work required in order for the work authorized by a permit to be considered commences?

Code reference:

NC Administrative Code and policies chapter 3 (GS 153A-358)

Answer:

There must be a clear indication that the work authorized by the permit has commenced. The work must be verified and documented by an inspection, and such work must be in accordance with the plans and the requirements of the North Carolina State Building Codes. The “reasonable” amount of work will be at the discretion of the Code Enforcement Official.

Example: New one and two family permits, including additions and accessory buildings and structures.

The following work will need to be completed in order for the permit to be commenced:

- The entire area under the building footprint must be cleared of trees
- The area must be grubbed (cleared of all vegetation stumps, roots, plants, etc.)
- The area must be graded
- The footing excavation must be completed with reinforcement steel installed (if required)
- The entire footing must be inspected and approved by the Code Official

Note: A saw service approval doesn't constitute a commenced project.

For renovation permits the work must be performed in accordance with the Code requirements and must be completed and or ready for the first required inspection.

Approved By Gene Morton Date 1/1/08

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: POURED FOUNDATION WALLS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Does a poured in place foundation wall require an inspection?

Code reference:

NC Administrative Code and Policies section 107.1.3

Answer:

Yes, concrete walls designed with reinforcement would require an inspection. A poured in place concrete foundation wall without reinforcement does not typically require an inspection prior to concrete placement. However, at the building inspector's discretion, this inspection may be required to insure that contractor is adhering to the requirements listed in Tables:

R404.1.1(1), (2), (3), (4)

R404.1.2(1), (2), (3), (4), (5), (6), (7), (8), (9).

R404.2.3

In addition, all poured in place concrete walls designed by Professional Engineers and/or Architects with reinforcement in the footing or wall must be inspected.

Approved By Jeff Vernon Date 1/5/2016

CODE



INTERPRETATION

MECKLENBURG COUNTY Building Code Enforcement

CODE: 2002 NC Residential Code

SUBJECT: Pull down attic stairs in garages

Reviewed by: Gene Morton/George Rogers/Jeff Griffin

Question: Does a pull down stairs, installed in the ceiling of an attached garage, have to meet the requirements for opening protection?

Code reference: R309

Answer: Yes, attic access doors in garage ceilings need to meet the opening protection requirement for garage separation per section R309.1. This is a change in the interpretation that was issued in 1993 by the Department of Insurance that allowed pull down stairs to be exempt. This will be enforced on any structure finalled after March 31st, 2006.

Acceptable alternates:

1. Extend the drywall separation on wall between house and garage all the way to roof deck, where possible, so that ceiling 1/2" sheetrock is not required.
2. Cover thin pull down door with 1/2" sheetrock or minimum 3/8" fire treated plywood adequately attached to garage side (Note: door must close completely and additional weight of sheetrock/plywood may require some type of lock, barrel bolt or other closure device to hold shut). Fire treated plywood must be factory stamped similar to what is used on townhouse roof decking at party walls.
3. Non-combustible metal door openings or pull down stairs.
4. Scuttle hole lids will need to be trimmed out with 2x material, not thin profile door or window trim/casing, to hold in place during a fire event. Other non-combustible attachments like barrel bolts, hinge and hasp could be used.
5. Cover scuttle hole lids or pull down stair doors with adequately attached 24 gage (0.48mm) sheet steel as allowed for duct penetrations listed under R309.1.1.

Approved By Gene Morton

Date 2/24/06

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: PULL DOWN ATTIC STAIRS AND SCUTTLE HOLES IN GARAGE CEILINGS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Does a pull down stair/scuttle hole, installed in the ceiling of an attached garage, have to meet the requirements for opening protection?

Code reference:

Section R309.1 Opening protection & Section R309.2 Separation required

Answer:

Yes, attic access doors in garage ceilings need to meet the opening protection requirement for garage separation.

Acceptable alternates:

1. Extend the drywall separation on the wall between house and garage all the way to roof deck so that ceiling 1/2" sheetrock is not required (house and garage attics are separated)
2. Cover thin pull down stair door with 1/2" sheetrock or minimum 3/8" fire treated plywood adequately attached to garage side (Note: door must close completely and additional weight of sheetrock/plywood may require some type of lock, barrel bolt or other closure device to hold shut). Fire treated plywood must be factory stamped similar to what is used on townhouse roof decking at party walls. Note: some pull down stair manufacturers have stairs with a fire treated plywood door cover.
3. Non-combustible metal door openings or non-combustible pull down stairs
4. Scuttle hole lids will need to be trimmed out with 2x material, no thin profile door or window trim/casing, to hold in place during a fire event. Other non-combustible attachments like barrel bolts, hinge and hasp could be used.
5. Cover scuttle hole lids or pull down stairs doors with adequately attached 24 gage (0.48mm) sheet steel as allowed for duct penetrations listed under R309.1.1.

Approved By Gene Morton Date 1/1/08

CODE



MECKLENBURG COUNTY

Building Code Enforcement

INTERPRETATION

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: RAFTER TIES

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

When are rafter ties required?

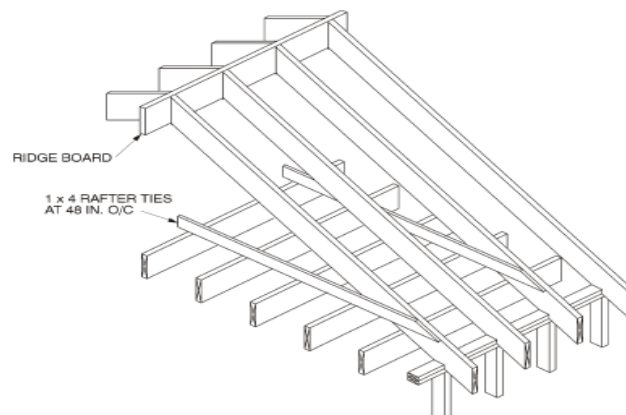
Code reference:

Section R802.3.1

Answer:

Rafter ties are required any time ceiling joists don't tie to the bottom of rafters. This would include but is not limited to the following conditions: Ceiling joists not parallel, ceiling joists don't form a wall to wall tie, rafters bearing on knee walls, rafters bearing on built up plates or beams.

The code intends for the rafter tie to resist roof truss forces at the rafter bearing. Collar ties are not rafter ties and both are required. Cathedral ceilings may be framed using a designed ridge beam.



Approved By Gene Morton

Date 1/1/08

Code



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

VOLUME: The North Carolina Administration and Enforcement Requirements Code

SUBJECT: Residential Elevators

REVIEWED BY: Consistency Team

QUESTION:

What are the code requirements for an elevator in a single family dwelling?

CODE REFERENCE:

Sections 205 and 503.2

ANSWER:

The 2002 North Carolina Residential Code for One and Two-Family Dwellings makes no reference to elevator. Unlike commercial elevators, the North Carolina Department of Labor does not inspect residential elevators. However, the Department of Labor recommends that the Code Enforcement Officials verify the following conditions:

1. Elevator has been installed according to manufacturer specifications
2. Elevator meets ANSI/ASME-A17.1
3. Elevator meets North Carolina Safety Code, Part 5
4. Elevator meets current National Electrical Code requirements.

Before a Certificate of Occupancy can be issued, the permit holder must provide the Code enforcement Official a letter from the elevator installer evidencing compliance with the above conditions.

Approved By: _____ Date: 06/23/98

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: RESIDENTIAL ELEVATORS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What are the Code requirements for residential elevators in single family dwellings?

Code reference:

NC Administrative Code and policies section 105

Answer:

The NC 2006 Residential Code makes no reference to elevators. Unlike commercial elevators, the North Carolina Department of Labor does not inspect residential elevators. However, the Department of Labor recommends that Code Enforcement Officials verify the following conditions:

1. Elevator has been installed according to manufacturer specifications.
2. Elevator meets ANSI/ASME-A17.1, NC residential elevator safety standards part 5.
3. Elevator meets current National Electrical Code requirements.

Before a Certificate of Occupancy can be issued, the permit holder must provide the Code Enforcement Official a letter from the elevator installer evidencing compliance with the above conditions.

Approved By Gene Morton

Date 1/1/08

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2012 NC RESIDENTIAL CODE

SUBJECT: RETAINING WALL GUARDS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Are guards required on retaining walls that have more than a 30" drop off to a lower grade level?

Code reference:

Section R312.1

Answer: Yes, if part of an egress path or along other dedicated walking surface

DOI interpretation:

"The 2012 NC Residential Code, Section R101.2 states; "Accessory structures are not required to meet the provisions of this code except decks, gazebos and retaining walls as required by Section R404.4."

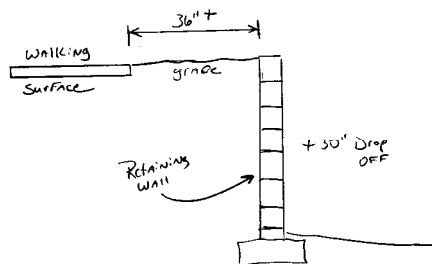
In accordance with the above, and R404.1.3, it is my opinion that the following residential retaining walls require design and are therefore required to be permitted:

- 1. All retaining walls with an unbalanced condition exceeding 48 inches*
- 2. All retaining walls that cross over property lines*
- 3. All retaining walls that support buildings and their accessory structures*

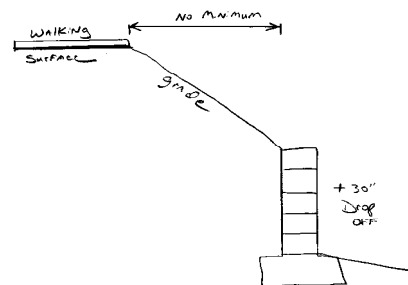
The NC Residential Code, Section R312.1 states; "Porches, balconies, or raised floor surfaces located more than 30 inches (762 mm) above the floor or grade below shall have guards in height." The NC commentary for this section states: "The guard provisions of this code address the issue of providing protection for occupants from falling off of any elevated walking surface."

It is my opinion that guards (complying with R312) must be included on any of the above mentioned retaining walls when the finished area on the high side of the wall is more than 30 inches above the grade below and part of an egress route or other dedicated walking surface".

In addition if the egress route or dedicated walking surface (not grass, but could include-concrete, gravel, pavers, wood walkways, etc...) is within 36" of a retaining wall meeting the requirements as listed above, a guard will be required. To not be considered adjacent to a retaining wall there needs to be at least 36" or greater level grade separation between the retaining wall and walking surface as illustrated below and can be made up of grass area or mulch bed with plantings. A steep grade associated with the walking surface where someone stepping off and cannot regain their balance will require a guard regardless of separation distance.



(No guard required)



(Guard required)

Approved By Jeff Vernon Date 1/5/2016

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: RISER HEIGHT AT THRESHOLDS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Where is the riser height measure at door openings with thresholds?

Code reference:

Section R311.5.3.1

Answer:

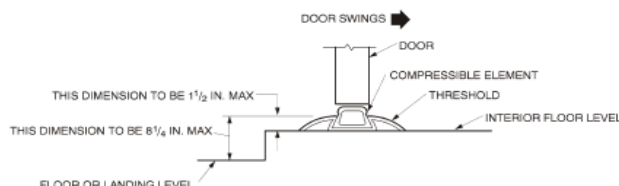
The requirements are specific at exterior doors with landings based upon door swing excluding storm or screen doors. The same standards of measurement as listed below for exterior doors shall apply to interior applications that use thresholds.

Exterior:

- If a door is **outswing** the landing cannot be lower than 1 ½" below **top of threshold** (flush landing, no riser-this is a landing required application based upon door swing).
- If a door is **inswing** the landing cannot be lower than 8 ¼" below **top of threshold**. Landings are not required in this application (inswing door) so stair flights must meet same last riser height limit of 8 ¼" to top of threshold if landing is not installed.

Interior:

- Section R311.5.3.1 doesn't specifically list an interior threshold when the Code states "The height of the top and bottom riser shall be measured from permanent finished surface (carpet excluded)". Thresholds not listed but the intent of the Code is to include thresholds in riser heights when installed. Such interior application would be garages; doors to unfinished basements and attics.



Approved By Gene Morton

Date 1/1/08

CODE _____



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Sack Concrete for Deck Supports

REVIEWED BY: Consistency Team

QUESTION:

Can sack concrete be used for deck footings?

CODE REFERENCE:

Section R402.2 and Appendix M

ANSWER:

Yes. Mecklenburg County Code Officials will allow sack concrete to be used as long as manufacturer guidelines are followed, including guidelines for compressive strength. The North Carolina State Building Code specifies that a minimum compressive strength of 2,500 PSI is required for concrete footings. Manufacturer mixtures (water to concrete ratios) are outlined on the sack concrete bag for footings and other requirements.

Approved By _____ Date 2-10-98

CODE



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: SEALED CRAWL SPACE PERMIT

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Is a permit required for sealing a crawl space on an existing home?

Code reference:

Section 106.1 of the NC Administrative Code and Policies ("permit required for all work described in the technical codes unless specifically exempted by the North Carolina Statutes or the technical codes")

Answer:

No building permit would be required unless the work exceeded ~~\$5,000~~ in cost.

Mechanical and or electrical permits, regardless of cost, may be required based upon the design.

The NC General statutes GS153A-357 and 160A417 states no permit (building) is required if the work is in a single family dwelling (commercial has no exceptions) and the cost of the work is \$5,000 or less and is not structural in nature. No building permit would be required for installation within this scope; work over \$5,000 would require a building permit and inspections.

Work \$5,000 or under would still need to be installed correctly and would fall back upon the owner of the property.

A mechanical and or electrical permit is required for any modifications to existing mechanical or electrical systems that are made to meet one of the space moisture control methods found in section R409.5 such introduction of supply air with backflow dampers or introduction of continuous conditioned air. Any additional work such as installing an outlet for a dehumidifier or wiring in a mechanical fan would require an electrical permit.

Modifications to these systems would require a licensed contractor in that field.

Approved By ___Gene Morton_____ Date _____3/12/09_____

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CODE _____



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: Volume VII

SUBJECT: Shims Under Wood Beams

REVIEWED BY: Consistency Team

QUESTION:

How do I shim under a wood beam that less than 1-½ inches or greater than 1 ½ inches above a pier?

CODE REFERENCE: Section R-108 and R-201.1

ANSWER:

It is acceptable to shim wood beams less than 1-½ inches or greater than 1 ½ inches if the following steps are followed.

- a. The center of the beam must be in center third of the shim.
- b. The center of shim bearing must be in center third of member on which it bears.
- c. The shim must extend at least 1-½ inches beyond the beam on each side.
- d. The minimum width dimension of the shim must equal or exceed the length dimension of the shim.
- e. If the shims are built up in layers they must be connected to prevent movement.
- f. The shim must be of the same grade and species of material as the beam. If a lower grade and species of material is used the bearing stresses must be checked by an engineer or architect. Shims can also be of steel as long as they meet items listed in a,b,c,d,e, listed above.
- g. If built up wood shims are provided, then the wood grain of each shim must be perpendicular to the adjacent layer.

Approved By _____ Date 11-3-99

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CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: SHIMS UNDER WOOD BEAMS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

How do I shim under a wood beam/girder above a pier?

Code reference:

NC Administrative Code and policies section 105

Answer:

It is acceptable to shim wood beams if the following steps are followed.

1. The center of the beam must be in the center third of the shim.
2. Shim must be completely under beam width or each ply of a multiply beam for complete support across beam width, also shim cannot project off pier.
3. The minimum width dimension of the shim must equal or exceed the length dimension of the shim.
4. If the shims are built in layers it must be connected to prevent movement.
5. Shims must be of the same grade and species of material as the beam. If a lower grade species of material is used the bearing stresses must be checked by an engineer or architect. Shims can also be of steel as long as they meet items 2, 3 listed above.
6. If built up wood shims are provided, then the wood grain of each shim must be perpendicular to the adjacent layer.
7. Limited to 4", if over 4" masonry should be extended on pier.

Approved By Gene Morton

Date 1/1/08

CODE



MECKLENBURG COUNTY
Building Code Enforcement

INTERPRETATION

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: SITE ADDRESS

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What is the correct way to post an address on a property, size, on house or can it be on the mailbox, can temporary address be up at final, etc...

Code reference:

Section R321.1 Site Address

Answer:

In addition to review of Code requirements issue was also discussed with Fire/Medic which included review of City of Charlotte and Mecklenburg County local ordinance to verify uniformity across all Departments with interpretation. The permanent numbers must be installed at time of final inspection to verify compliance with the Code. The numbers need to be placed on the house itself and per County ordinance (section 19-99) they must be minimum 4" high. The numbers must be plainly visible from the road frontage, which could require numbers to be bigger (if needed) to be seen from the road. If structure is too far from the public travel way for reasonably sized numbers to be seen, the property owner shall erect where the main driveway to the building intersects the public travel way an additional set of numerals which are to be legible from vehicles traveling at the prevailing speed on the roadway. Note: the numbers must be plainly visible which may require them to be installed on a contrasting background. Numbers should be installed on a fixed surface to remain always "plainly visible".

Approved By Gene Morton

Date 1/1/08

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: DEFINITION OF A SLEEPING ROOM (BEDROOM)

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

What is the definition of a sleeping room (bedroom) as used in the residential code?

Code reference:

Section R310 Emergency Egress required. (related section of the State Electrical Code is section 210-71 Smoke Detector(s) required.)

Answer:

A sleeping room (bedroom) is defined by Mecklenburg County as: An enclosed room with a door and one or more closets which appears to be designed for, or which could likely be used for sleeping and includes rooms which may be identified as; den family room, study, office, library, etc...

Exception: Bonus rooms (such as typically found above garages) that do not have storage closets with full size doors (less than six feet high) are not required to comply with sleeping room requirements.

Note: Rooms meeting the definition above require compliance with **all** of the Code requirements including but not limited to Section R310 Emergency Egress Required which requires an approved emergency egress window or an exterior door opening directly from the room. In addition, Section 210-71 of the State Electrical Code requires a smoke detector to be installed and in the area just outside each sleeping room.

Approved By Gene Morton Date 1/1/08

Code _____



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: Volume VII

SUBJECT: Soil Tests

REVIEWED BY: Consistency Team

QUESTION: WHEN IS THE ONE/TWO FAMILY SUBGRADE VERIFICATION FORM REQUIRED.

CODE REFERENCE: SECTION 401.4 SOIL TESTS

ANSWER: THE ONE/TWO FAMILY SUBGRADE VERIFICATION FORM IS REQUIRED FOR THE REPORTING OF SOIL TEST RESULTS CONDUCTED BY THIRD PARTY SOIL TESTING COMPANIES. THE FORM IS REQUIRED FOR ANY "FILLED" BUILDING PADS AND ANY QUESTIONABLE RESIDUAL SOILS AS DETERMINED BY THE BUILDING OFFICIAL.. THE FORM IS REQUIRED ONLY FOR ONE AND TWO FAMILY DWELLINGS.

THE FORM SHALL BE TRANSFERRED TO THE TESTING COMPANIES LETTERHEAD, FILLED OUT COMPLETELY, SIGNED BY THE SOIL TESTING COMPANY'S LICENSED ENGINEER, AND SUBMITTED TO AND APPROVED BY THE BUILDING OFFICIAL. NO ALTERATIONS TO THE FORM (OTHER THAN COMPANY LETTERHEAD) WILL BE PERMITTED. ANY ADDITIONAL STATEMENTS SUCH AS DISCLAIMERS OR REFERENCES TO OTHER DOCUMENTS OR REPORTS WILL RESULT IN REJECTION OF THE FORM BY THE BUILDING OFFICIAL.

THIS FORM IS REQUIRED FOR ALL ONE/TWO FAMILY PROJECTS PERMITTED ON OR AFTER JUNE 1, 1999.

Approved By _____

Date 4-5-99

CODE



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Stair Riser Height

REVIEWED BY: Consistency Team

QUESTION:

Is the riser height on a set of interior stairs measured from the top of the threshold or the finished floor?

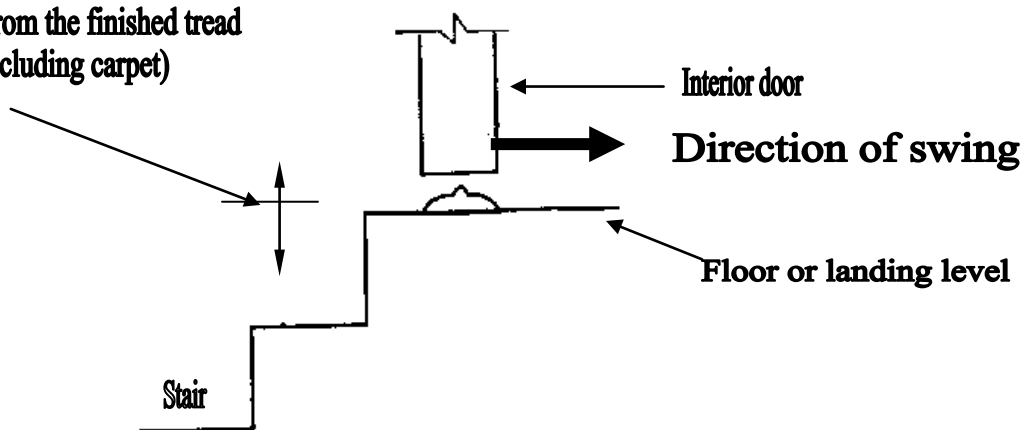
CODE REFERENCE:

Section R314.2

ANSWER:

The riser height is measured from the top of the step to the finished floor surface (excluding carpet). The threshold is not included in the riser height measurement of interior stairs

8 1/4" max, measured from the finished tread
to finished floor (excluding carpet)



Approved By _____ Date: 07/01/02

CODE



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Step Flashing

REVIEWED BY: Consistency Team

QUESTION:

What is the proper method of installation for step flashing at roof to wall intersection?

CODE REFERENCE:

Section R703.8 Flashing

ANSWER:

The Brick Institute of America published a design detail in Engineering and Research Digest that states the following, “a combination of tray flashing and stepped flashing should be used in areas where brick masonry intersects an adjacent sloping surface or when it surrounds a curved or sloped wall opening. Stepped flashing may be placed in every course or every other course of brick, following the bond pattern and stepping down around the opening or sloped surface. Stepped flashing in higher courses should overlap the layer of stepped flashing below by 4” (100 mm).

Approved By _____ Date: 07/01/02

CODE



MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Stone in Crawl Space

REVEIWED BY: Consistency Team

QUESTION:

May washed stone be placed in the crawl area to achieve final grade?

CODE REFERENCE:

Section R409

ANSWER:

No. Final grade in the crawl must be achieved with soil. After final crawl grade has been inspected and approved, (foundation inspection) then stone may be added and graded. Placing stone prior to grade inspection may result in low areas being filled with stone rather than being graded properly.

Approved By _____ Date: 07/01/02

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: STUCCO CERTIFICATION FORM

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

When does Mecklenburg County require a Stucco compliance statement to be submitted?

Code reference:

NC Administrative Code and Policies section 105

Answer:

The approved stucco compliance statement must be submitted prior to issuance of the Certification of Occupancy on any structure covered by the Residential Building Code when stucco (*any type*) is used as the primary wall covering on any part of the structure. This includes structures where only dormers, bays, gables, fireplace chases, or other small areas are covered. A stucco compliance statement is not required where stucco trim is placed on top of brick veneer as an aesthetic covering only.

Approved By Gene Morton

Date 1/1/08

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: SURFACE WATER DRAINAGE

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Are driveways and sidewalks required to slope away from the foundation of residential dwellings?

Code reference:

Section R401.3

Answer:

Yes, sidewalks and driveways along with other flat concrete work like back yard patios up against house foundation must have positive drainage to prevent trapping and ponding of water against house. The only exception to this requirement is when physical barriers such as lot lines or walls (obstacles that are not controllable by the contractor or owner) prevent proper sloping. In these instances, the contractor or owner must ensure the use of drains or swales to protect the area surrounding the foundation.

Approved By Gene Morton

Date 1/1/08

CODE



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

VOLUME: Volume VII

SUBJECT: Temporary Front Doors at Final

REVIEWED BY: Consistency Team

QUESTION:

Are temporary front doors allowed to be in place for the final inspection?

CODE REFERENCE

Section 3905, Exterior Doors and Windows.

ANSWER:

Yes, as long as the door is weather stripped and has an R-value of at least R-1.66

Approved By _____ Date 8-5-97_____

CODE



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Tempered Glazing / Permanent Barrier

REVIEWED BY: Consistency Team

QUESTION:

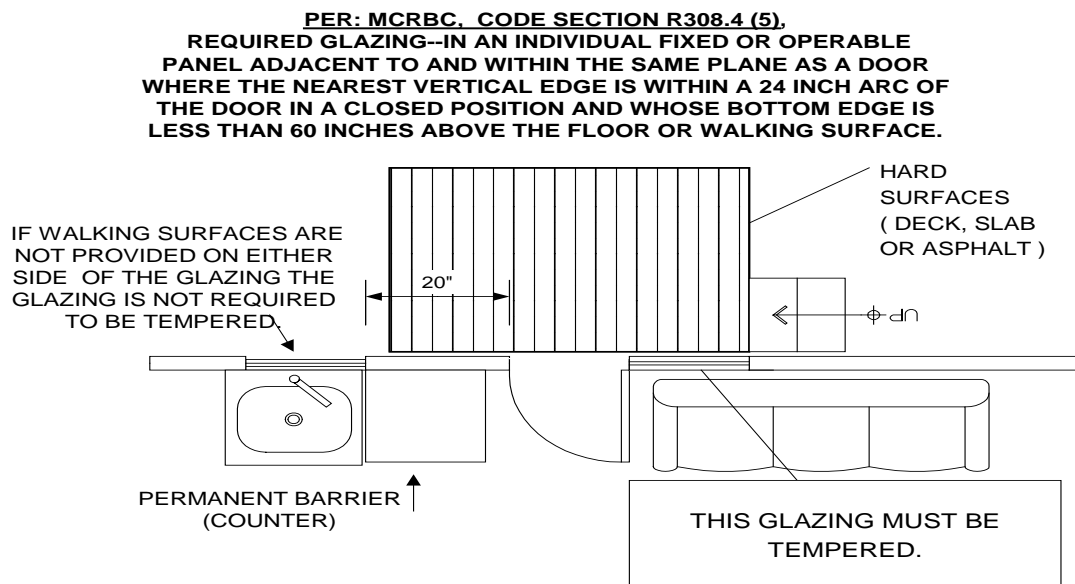
What is considered a walking surface when determining the need for tempered glass? Does this apply to exterior walking surfaces?

CODE REFERENCE:

Section R308.4, Items 5 and 6

ANSWER:

A walking surface is any interior floor. A walking surface is also any exterior surface such as decks, porches, slabs, steps or sidewalks. Tempered glass would be required when any interior or exterior walking surface is within the parameters of the code section. The existence of a permanent barrier on one side of the window would not eliminate the need for tempered glass if the conditions on other side would still require tempered glass.



Approved By _____ Date: 01/16/99

CODE



INTERPRETATION

Mecklenburg County

Building Code Enforcement

CODE: 2006 NC Residential Code

SUBJECT: Tread nosing requirements

Reviewed by: 101, 139 & 147

Questions:

1. If a flight of stairs has a uniformed tread depth of 11" is a nosing required?
2. If a nosing is provided on an 11" tread depth stair are they required to be uniformed?

Code reference: R311.5.3.3

ANSWER:

No to both questions. Exception #1 under R311.5.3.3 states that a nosing is not required if an 11 inch tread depth is met. If in a flight of stairs there is a uniformed 11 inch depth measured at the treads leading edges then no uniformed nosing is required. In this case, as pictured below, treads could have a variety of nosing and no nosing application as found on some stone steps as long as uniformity of the tread was maintained and depth was enough to meet the requirements of exception #1. The structural support capacity of any such nosing projection must be taken into account.

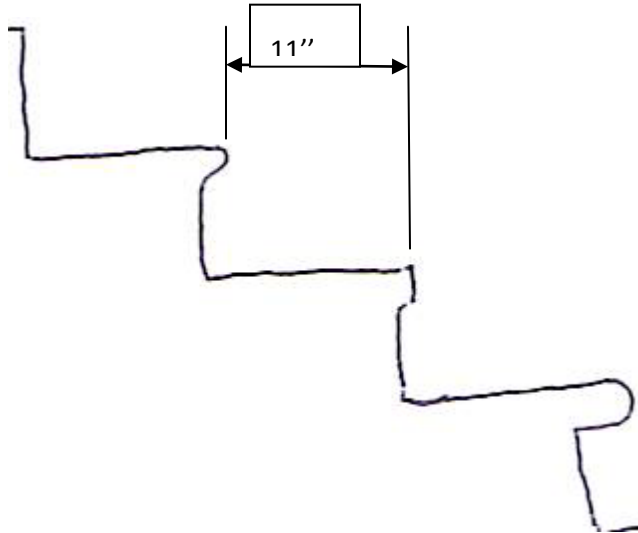
CODE

Mecklenburg County

Building Code Enforcement



INTERPRETATION



Approved By Gene Morton Date 1/1/08

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CODE



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Wall Sill Plate Anchors

REVIEWED BY: Consistency Team

QUESTION:

What are the requirements for wall sill plate anchorage?

CODE REFERENCE:

Figure R403.1.6

ANSWER:

Exterior wall sill plates are required to be anchored to concrete or masonry foundations with 1/2" anchor bolts spaced at six feet maximum apart with an anchor within one foot of each ends of each plate section (doors, breaks in and sill, pipes, etc). Anchor bolts must have 7" embedment in concrete and 15" embedment in masonry.

As an alternative, other types of approved anchorage systems may be used. The system must provide an equal, or better performance, as the Code specified anchor bolts. Straps anchors, such as those manufactured by Hutch and Simpson, are installed during the wall construction. The manufacturer's installation requirements must be followed.

Other types of anchor that may be used are those installed after the foundation has been completed and includes "after the sills have been placed on the foundation and are quite often used as a corrective measure when the required anchorage has been omitted or misplaced in error. As with the ☐ strap anchors these bolts must be installed distinct accordance with the manufacturer's installation requirements with the specified spacing and embedment.

☐ wedge bolts" and

You may check with the Department for a list of approved alternate anchors.

Approved By _____ Date: 07/08/02

CODE



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: Volume VII
SUBJECT: Dampproofing
REVIEWED BY: Consistency Team

Question: When can dampproofing be eliminated?

Code Reference: Section 405

Answer:

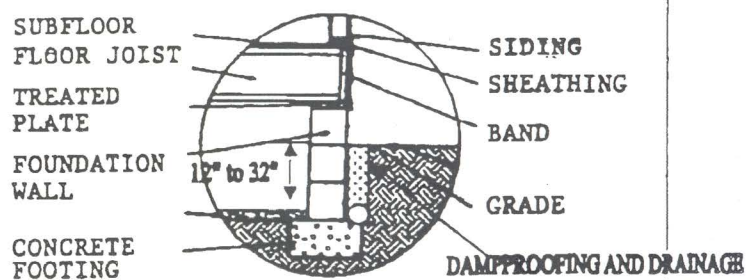
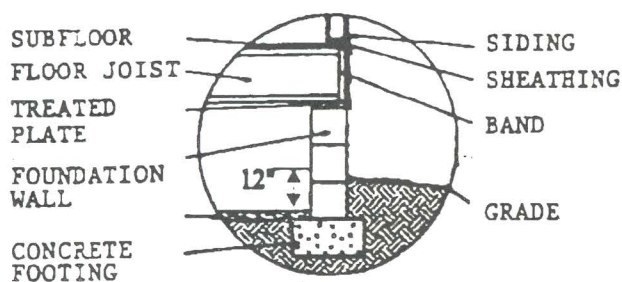
Perimeter foundation dampproofing can be eliminated when the backfill against the foundation wall is less than 12" in height (please refer to Figure A below). When backfill ranges in height from 12" to 32" both dampproofing and drainage are required (please refer to Figure B below).

Figure A

1. Surface drainage
2. Crawl space drainage
3. Backfill less than 12" in height does not require dampproofing

Figure B

1. Surface drainage
2. Crawl space drainage
3. Dampproofing and drainage required



Approved By Gene Morton

Date 6-23-98

CODE



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

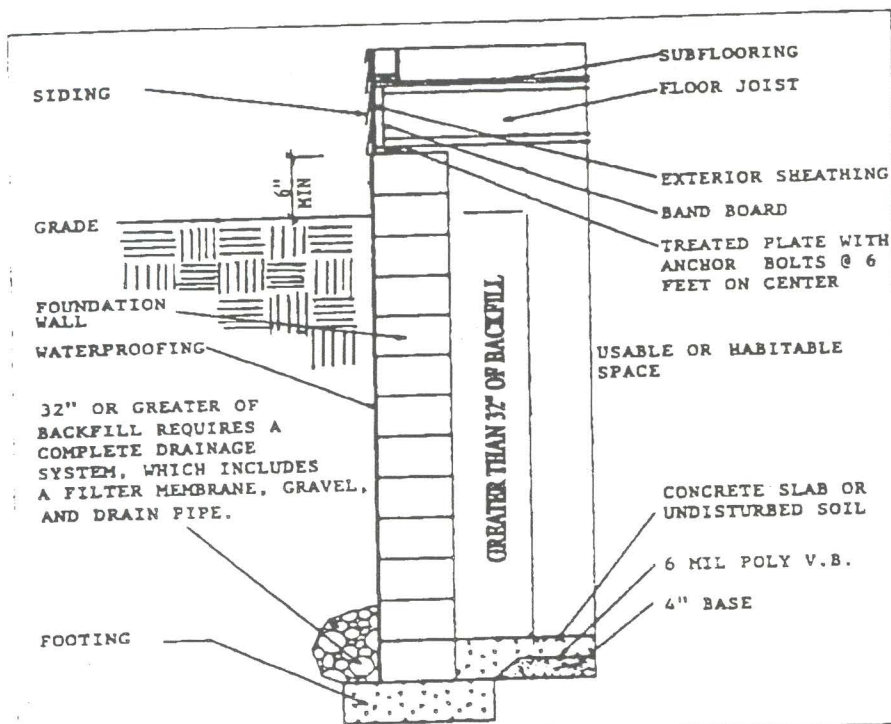
INTERPRETATION

VOLUME: Volume VII
SUBJECT: Waterproofing
REVIEWED BY: Consistency Team

QUESTION: When is waterproofing required on a foundation wall?

CODE REFERENCE: Section 406.1

ANSWER: Waterproofing is required when the backfill against the foundation wall is greater than 32" in height. This situation also requires a drainage system with the following features: 1) filter membrane, 2) gravel and 3) pipe draining to daylight. Please refer to the illustration below and to Section 406.1 for installation guidance.



Approved By Gene Morton Date 6-23-98

CODE



INTERPRETATION

MECKLENBURG COUNTY

Building Code Enforcement

CODE: 2006 NC RESIDENTIAL CODE

SUBJECT: WET SETTING REBAR

REVIEWED: RESIDENTIAL CONSISTENCY TEAM

Question:

Is it ok to wet set rebar such as in footers or wall dowels?

Code reference:

Section R402.2, Chapter 43 reference ACI 318, NC Administrative Code

Answer:

No. Code references listed require all reinforcing steel to be in place and properly supported and tied prior to concrete placement. Administrative Code section requires completion before the footing inspection may occur. The only way any reinforcing steel may be placed after the inspection occurs is if it is not shown on and/or required by approved plans. This applies to reviewed and non-reviewed plans alike. Rebar shown on any plans sealed by a North Carolina design professional shall be considered as a required part of the designs.

Wet setting of foundation anchors (straps and bolts) should not be prohibited unless a permit holder habitually fails to properly place them.

Approved By Gene Morton

Date 1/1/08

Code



MECKLENBURG COUNTY ENGINEERING & BUILDING STANDARDS DEPARTMENT

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Winders

REVIEWED BY: Consistency Team

QUESTION:

How are winders measured?

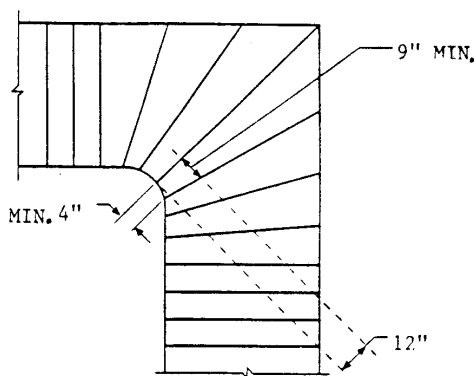


FIGURE 314.4
WINDERS

CODE REFERENCE:

Section R314.4

ANSWER:

Winders require a minimum tread width of 4". In addition, the tread must be at least 9" wide when measured from the narrowest part of the tread to a point no more than 12" away

Approved By: _____ Date: 08/05/97

Code



**MECKLENBURG COUNTY
ENGINEERING & BUILDING
STANDARDS DEPARTMENT**

INTERPRETATION

VOLUME: 2002 North Carolina Residential Code for One and Two-Family Dwellings

SUBJECT: Wood Blocking – Exterior Structural Plywood Sheathing

REVIEWED BY: Consistency Team

QUESTION:

Is wood blocking required when a 4' x 8' structural sheathing panel does not extend to the top or bottom plate of the exterior wall?

CODE REFERENCE:

Table R602.3(1)

ANSWER:

Yes. All structural plywood sheathing used for bracing must meet the nailing requirements outlined in Table R602.3(1). If the structural sheathing panel edges are not attached to the structural framing, wood blocking must be installed behind the edges to meet the nailing requirements.

Approved By _____ Date: 12/03/97